

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/799,778	NAKAMURA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mark Kopec	1751	

All participants (applicant, applicant's representative, PTO personnel):

(1) Mark Kopec. (3)\_\_\_\_\_.

(2) Edward Meilman. (4)\_\_\_\_\_.

Date of Interview: \_\_\_\_\_.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: All.

Identification of prior art discussed: Siuta et al (4,521,329).

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Claims were amended to recite Markush group of either first or second metal oxide. See Reasons for Allowance.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

**DICKSTEINSHAPIRO<sub>LLP</sub>****FAX TRANSMISSION**

1177 Avenue of the Americas | New York, NY 10036-2714  
TEL (212) 277-6500 | FAX (212) 277-6501 | dicksteinshapiro.com

DATE	CLIENT NO	
September 28, 2006	M1071.1896	
RECIPIENT	COMPANY	
Examiner M. T. Kopec	U.S.P.T.O.	
FAX	PHONE	
(571) 273-1319	N/A	
SENDER	TIMEKEEPER NO	PHONE
Edward A. Meilman/Jennifer M. Spinning	0270/9171	(212) 277-6520/ (212) 277-6568
PAGES (INCLUDING COVER SHEET)	HARD COPY TO FOLLOW	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
7		
	SENT BY	DATE:
	JMS	SEPTEMBER 28, 2006

Please see attached draft amendment.

DRAFT  
COPY

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Washington, DC | New York, NY | Los Angeles, CA

DOCSNY-215694v01

Docket No.: M1071.1896

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Ryoji Nakamura

Application No.: 10/799,778

Filed: March 15, 2004

Art. Unit: 1751

For: CONDUCTIVE PASTE AND CERAMIC  
MULTILAYER SUBSTRATE

Examiner: M. T. Kopec

**Draft**

FIRST PRELIMINARY AMENDMENT

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**INTRODUCTORY COMMENTS**

Prior to examination on the merits, please amend the above-identified U.S. patent application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 3 of this paper.

**Remarks/Arguments** begin on page 6 of this paper.

DOCSNY-215556v01

## FEE CALCULATION

Any additional fee required has been calculated as follows:

	No. Claims After Amendment		Highest No. Previously Paid For		Extra Present		Rate	Additional Fee
Total	20	MINUS	20**	=	0	X		\$
Indep.	2	MINUS	3**	=	0	X		\$
First presentation of multiple dependent claim(s)							X	\$
TOTAL								\$ -0-

\* not less than 20

\*\* not less than 3

In the event the actual fee is greater than the payment submitted or is inadvertently not enclosed or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-2215.

## CONTINGENT EXTENSION REQUEST

If this communication is filed after the shortened statutory time period had elapsed and no separate Petition is enclosed, the Commissioner of Patents and Trademarks is petitioned, under 37 CFR 1.136(a), to extend the time for filing a response to the outstanding Office Action by the number of months which will avoid abandonment under 37 CFR 1.135. The fee under 37 CFR 1.17 should be charged to our Deposit Account No. 50-2215.

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### AMENDMENTS TO THE CLAIMS

1 (Currently amended). A conductive paste adapted to be sintered with a ceramic body at the same time, the conductive paste comprising a conductive component and an organic vehicle,

wherein the conductive component comprises a copper powder coated with a first metal oxide having a melting point exceeding the melting point of copper, wherein the first metal oxide comprises at least one metal oxide selected from the group consisting of  $\text{Al}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{TiO}_2$ ,  $\text{SiO}_2$ ,  $\text{Nb}_2\text{O}_5$  and  $\text{Ta}_2\text{O}_5$ , and a powder of a second metal oxide having a melting point exceeding the melting point of the copper

the content of the first metal oxide is in the range of about 0.05% by weight to about 5% by weight of the total weight of the coated copper powder and the metal oxide powder; and

the total content of the first metal oxide and the powder of the second metal oxide is in the range of about 1% by weight to about 12 % by weight of the total weight of the coated copper powder and the metal oxide powder.

2 (Canceled).

3 (Currently amended). The conductive paste according to claim [[2]] 1, wherein the second metal oxide comprises at least one metal oxide selected from the group consisting of  $\text{Al}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{TiO}_2$ ,  $\text{SiO}_2$ ,  $\text{Nb}_2\text{O}_5$  and  $\text{Ta}_2\text{O}_5$ .

4 (Original). The conductive paste according to claim 3, wherein the first metal oxide is  $\text{Al}_2\text{O}_3$ .

5 (Original). The conductive paste according to claim 4, wherein the second metal oxide is  $\text{Al}_2\text{O}_3$ .

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6 (Original). The conductive paste according to claim 5, wherein the viscosity of the paste is about 10 to 700 Pa·s.

7 (Original). The conductive paste according to claim 1, wherein the first metal oxide is  $\text{Al}_2\text{O}_3$ .

8 (Original). The conductive paste according to claim 1, wherein the second metal oxide is  $\text{Al}_2\text{O}_3$ .

9 (Original). The conductive paste according to claim 1, wherein the viscosity of the paste is about 10 to 700 Pa·s.

10 (Original). The conductive paste according to claim 8, wherein the vehicle is about 10-55 weight percent thereof.

11 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 10.

12 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 9.

13 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 8.

14 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 7.

15 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 6.

16 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 5.

17 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 4.

18 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 3.

19 (Canceled).

20 (Original). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim 1.

21 (New). A conductive paste adapted to be sintered with a ceramic body at the same time, the conductive paste comprising a conductive component and an organic vehicle,

wherein the conductive component comprises a copper powder coated with a first metal oxide having a melting point exceeding the melting point of copper and a powder of a second metal oxide having a melting point exceeding the melting point of the copper, wherein the second metal oxide comprises at least one metal oxide selected from the group consisting of  $\text{Al}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{TiO}_2$ ,  $\text{SiO}_2$ ,  $\text{Nb}_2\text{O}_5$  and  $\text{Ta}_2\text{O}_5$ ;

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the content of the first metal oxide is in the range of about 0.05% by weight to about 5% by weight of the total weight of the coated copper powder and the metal oxide powder; and

the total content of the first metal oxide and the powder of the second metal oxide is in the range of about 1% by weight to about 12 % by weight of the total weight of the coated copper powder and the metal oxide powder.

22 (New). A ceramic multilayer substrate comprising a ceramic sinter and a conductive sinter, wherein the conductive sinter is a sintered conductive paste according to claim

21.

Draft

DOCSNY-215556v01

Application No. 10/799,778  
Amendment dated September 27, 2006  
First Preliminary Amendment

Docket No.: M1071.1896

REMARKS

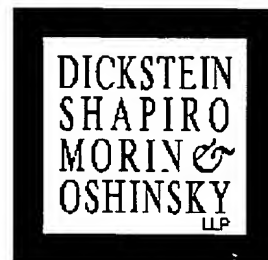
In a telephone conversation on September 27, 2006, Examiner Kopec advised that the claims as amended above are allowable. Accordingly, this Preliminary Amendment is being submitted.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: September 27, 2006

**Draft**  
Respectfully submitted,  
By \_\_\_\_\_  
Edward A. Meilman

Registration No.: 24,735  
DICKSTEIN SHAPIRO LLP  
1177 Avenue of the Americas  
41st Floor  
New York, New York 10036-2714  
(212) 277-6500  
Attorney for Applicant

**FAX TRANSMISSION**DATE: 9/28/2006CLIENT NO.: .

MESSAGE TO: \_\_\_\_\_

COMPANY: \_\_\_\_\_

FAX NUMBER: 15712731319

PHONE: \_\_\_\_\_

FROM: Spinning, JenniferPHONE: 212-277-6568PAGES (Including Cover Sheet): 10**MESSAGE:**

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